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Implementation of an Educational Initiative; Addressing Central Line Associated Bloodstream Infections

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Purpose

Provide a multimodal approach to to hospital wide RN education and competency validation involving high-risk patients with a central venous catheter (CVC)

Background

 Nurses demonstrate annual competence in CLABSI prevention and patient care

- Increased CLABSI cases noted January March of 2023 as compared to previous year
- Nursing Education Team was charged to develop action plan to retrain all nurses accessing CVCs
- •629 nurses from 26 areas were to receive retraining and evaluation within one month's time

Methods

A Phased approach was used:

 Phase 1: Nursing Leadership Identify Lead RN trainer •Communicate plan to nurses

• Phase 2: Nursing Education Team

- •Design training and competency documents for each department
- Formal consultation with Lead RN and review of Train-the-Trainer (TTT) Model
- •Assist in communicating re-training process to frontline nurses

Phase 3: Lead RN train unit trainers

- Lead RN educated and evaluated unit-based trainers
- •Lead RN provided training completion updates Unit-based trainers re-educated and evaluate unit RNs

Three key areas included in retraining consisted of:

- 1. Sterile Cap Change
- 2. Daily CLABSI Initiatives and documentation
- 3. Sterile Dressing Change Procedure (ICUs only)

Results

- •The Lead Trainer educated and evaluated 63 unitbased trainers within 9 days of starting this project
- Approximately 328 nursing staff were re-trained by unit-based trainers within the first 19 days of this project
- •Overall 98.78% of staff nurses completed the retraining within a 7 week period
- Since the start of re-training, one CLABSI was identified in April and no cases reported in May.

Children's Hospital of Michigan Central Line Days and CLABSI Rates

January 2022 - March 2023

Line Days -I of CLAB

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Children's Hospital

CLABSI Competency for CHM RNS: Sterile Cap Change - 2023



- Data revealed a decrease in CLABSI rates from an average of 2.33 CLABSIs/1000 Line days between Jan.-Mar, to 0.76 CLABSIs/1000 Line days in April
- Due to time limitations post re-training and education, there is limited data available to show prolonged reliability on CLABSI education
- •Additional follow up is needed to assess long-term implications



Printed Employee Name:							
Validator Name Validator Initials							
COMPETENCY STATEMENT: Nurse must demonstrate CLABS1 interventions for patients with central lines	e kzewiedge of						
CLABSI Prevention and Precautions	Completed						
CBM PED 337- CBM House-Wide CVC Bundle	Company	L'ALANCE					
inter rationale for the use of gloves prior to touching central line tubin	8			A			
inter length of time required to somb the hab of central lines	1			A			
Describes why a "pulse fluck" technique is used to thish central lines				A			
febalton when central line descrings must be changed	1			A			
[patient requires a central line densing change, but that area does not orthona the densing change, who must RN contact?				A			
inter why Riepatch® or CRG descings is used on restral lines				A			
inter when IV solutions taking must be changed and labeled				A			
Narazzes why council line cap as tabing should be changed if blood or fored stamme, in visible				A			
Autolizes importance to collaborate with other services to coascildate in number of entries into the central line.	1			A			
Secribes actions in the event of a compromised line.	1			A			
Narransee the indications for ethanol looks	1			Al			
Describes how often CHG bushing must be completed and documented in patients with a central line				A			
Arbaiton why patient gown and bedding is changed after CHO hathing				A			
inter where to document CHO Burks and CLABSI care in EMR	1			A			
tates importance of CLAB51 education for patients and families				A			
Explains the purpose of Central line makes and what mathem will valuate when observing the status patient central line				A			

CLABSI Competency for CHM RNS : C	entral Lin	ie Dressi	ig Char	ige- 2023	
Printed Employee Name:			<u>"Apr Specific Population</u> N=Nonane (Jans Han 20 April) 1= India (O Asys, Issue) EC = Endy Childhood (J-3 yana) A = Addisone (D.17 yana) AD = Addis (Over 17 yana) ALL = AL Ages		
Central Line Dressing Change Procedure	Completed	Sorthod of Evaluation	Validator Jactida	Age Specific Population*	
States when control line decoints must be changed				AL	
States when contrasting absorbatic proper hand by given and Prepares patient and denormhates proper hand by given and doving throughout entire process				A	
personal consequences and a second seco		-		AL	
Done multi-gloves and propares kit maintaining medity • Opens and prepares all stends densing modifier and • Opens and propage all skin channing mandem				л	
Completes 30 second Chloroperp scrah at insertion site, or Completes 2 min second Chloroperplocab (poin lines)				14	
Allows 30-60 second dry time				AL	
States alternative skinysepping agents for patients less than 14 needs: centation or those who matmeet CHG otheria				74	
Places Disputch & everymention site, as apprendiate				AL	
Properly applies studie transport devolution over insection site etdoor allowing any pulling or tension on CVC tabing.				Al	
For nating at bleeding CVC insertion sites, explains use of gauge densing and need to change every 43 hours.				14	
Labels dressing appropriately with date time.				AL	
Documents procedure in EMP.				AL	

Implications

- A blended phased approach of a Train-the-Trainer model allowed for the re-educating of frontline nurses to occur within a short time period.
- Focusing on 3 key areas for all 26 nursing areas provided consistency in education across the organization

Limitations

Numerous limitations were identified by the Lead RN Trainer regarding CLABSI rates and the overall education provided during TTT sessions.

Limitations were:

- Staff turn over
- Increased numbers of new RN still developing CVC care and practices
- •Limited availability for additional RNs to assist with sterile procedures in pediatric environment
- •Challenges to adhere to CVC access consolidation due to Provider orders or directives
- •Challenges in some areas for RNS to maintain knowledge and skill due to low exposure to patients requiring CVC care
- Differing practices amongst the nursing areas
- CICU patients returning post-operatively without CLABSI prevention caps (Microclave®) on CVC lines
- Inconsistent cap change frequencies
- •Changes in CVC supplies or product manufacturers
- Limited patient/family CLABSI awareness
- Inconsistent use of family education materials
- •Varving knowledge or use of Ethanol/antibiotic lock for CLABSI prevention and prophylaxis
- Decreased availability of CVC support staff
- High patient acuity